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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,723	11/08/2006	Henrik Ljungcrantz	10400C-000162/US	5601
30/593 7590 03/03/2010 HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195				
EXAMINER MOORE, KARLA A				
ART UNIT		PAPER NUMBER		
1792				
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03/03/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/534,723

Applicant(s)

LJUNGCRANTZ ET AL.

Examiner

KARLA MOORE

Art Unit

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/GS/US)
Paper No(s)/Mail Date 0505
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-7 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,820,329 to Derbinski et al. in view of U.S. Patent No. 4,226,208 to Nishida et al.

4. Regarding claim 1, Derbinski et al. disclose a device (10) for carrying out a surface treatment of a substrate under vacuum substantially as claimed, which comprises a housing (11), which has at least two chambers (14-18) communicating with at least one vacuum source (although not explicitly detailed, such would inherently be

present), at least one of which chambers is designed to serve as a vacuum lock chamber (14) which can be opened to the atmosphere and in which the substrate can be introduced and removed for access to the remaining chambers wherein the housing has an upper (12) and a lower (13) housing half peripherally joined, at least one of the housing halves having at least two symmetrically distributed recesses (each of the halves has symmetrically distributed recesses, see Fig. 1) which are intended to constitute at least some of the chambers (again, see Figure 1), together with a revolver (multiple structures, e.g., 20 and 28) pivotally mounted between the housing halves and having recesses (21-25) in which the substrate is intended to be placed, the housing halves under the force of force generating member (although not explicitly detailed, such would be inherently present to actuate chamber recesses/covers such as 46 and 54) (Note: 46 and 64 are considered to be recesses of the housing halves as there are located therein) being designed to be moved from a first position in which the housing halves, through tight, sealing contact with the revolver prevent rotation thereof, to a second position in which the upper and lower housing halves are separated from the revolver in order to permit rotation of the latter to predefined positions in which at least one of the recesses in the revolver at least partially coincides with one of the chambers allowing the substrate to be moved between the chambers.

5. However, Derbinski et al. fail to disclose the upper and lower halves joined by a flexible sealing member.

6. Nishida et al. disclose upper and lower halves of a vacuum device joined by a flexible sealing member (86) for the purpose of forming a sealed vacuum container (see, e.g., Fig. 2, 86 and column 2, rows 56-60).

7. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided the upper and lower halves of the vacuum device in Derbinski et al. joined by a flexible sealing member in order to form a sealed vacuum container as taught by Nishida et al.

8. With respect to claim 2, the apparatus of Derbinski et al. is capable of providing a situation wherein from the second position the upper and lower housing halves are designed to assume the first position when the force generating member no longer acts between the housing halves.

9. With respect to claim 3, both upper and lower housing halves have co-incident recesses and the recesses in the revolver are through recesses. See, e.g., Fig. 1.

10. With respect to claim 4, the vacuum lock chamber is provided peripherally with a sealing member (27) designed to seal the vacuum lock chamber off from the remainder of the housing and from the revolver when the housing halves are in their first position.

11. With respect to claim 5, the remaining chambers are also provided peripherally with sealing members (27) designed to seal these off from the remainder of the housing and from the revolver when the housing halves are in their first position.

12. With respect to claims 6 and 7, Derbinski et al. fail to disclose explicitly how a vacuum source or vacuum sources are connected to the vacuum device.
13. Nishida et al. disclose a vacuum device comprising a common space connecting a plurality of chambers, wherein each of the plurality of chambers is capable of performing independent processing when in a sealed condition. Nishida et al. further provide a vacuum pump for the common area as well as each for each of the plurality of chambers enabling common evacuation when the chambers are in communication and individual evacuation when they are not. See, e.g., Fig. 2.
14. It would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to have provided common and individual vacuum sources for the housing and the chambers in order to allow for evacuation when they are in communication with one another as well as when they are not as taught by Nishida et al.
15. With respect to claim 9, the sealing members are o-rings. See, e.g. Fig.1 of Derbinski et al.
16. With respect to claim 10, Derbinski et al. disclose the device substantially as claimed and as described above.
17. However, the structure of the force generating member is not elaborated upon.

18. Nishida et al. disclose the use of a hydraulic cylinder for the purpose of generating force to provide sealing contact between device structures (e.g., column 3, rows 32-38).

19. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a hydraulic cylinder as the force generating member in Derbinski et al. in order to provide sealing contact between structures of the device as taught by Nishida et al.

20. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Derbinski et al. and Nishida et al. as applied to claims 1-7 and 9-10 above, and further in view of U.S. Patent No. 5,415,729 to Strasser et al.

21. Derbinski et al. and Nishida et al. disclose the device substantially as claimed and as described above.

22. However, Derbinski et al. and Nishida et al. fail to disclose the flexible sealing member is a metal bellows.

23. Strasser et al. disclose the use of metal bellows for providing sealing for the purpose of advantageously bridging larger spaces as well as forming seals that are considerably stronger (column).

24. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a metal bellows as the flexible sealing member in Derbinski et al. and Nishida et al. in order to advantageously bridge larger surfaces as well as to form a considerably stronger seal as taught by Strasser et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KARLA MOORE whose telephone number is (571)272-1440. The examiner can normally be reached on Monday-Friday, 9:00 am-6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571.272.1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Karla Moore/
Primary Examiner, Art Unit 1792